

BANKNOTE RECEIVER FOR TICKET VENDOR

BACKGROUND OF THE INVENTION

1. Field of the Invention:

The present invention relates to a banknote receiving
5 system for use in a ticket vending machine, money exchange
machine, or the like and, more particularly to such a banknote
receiver, which effectively prohibits people from pulling back
inserted banknote.

2. Description of the Related Art:

10 FIG. 5 illustrates a prior art banknote receiver for use in a
ticket vending machine, money exchange machine, or the like.
According to this design, the banknote receiver comprises a
housing C with a banknote insertion slot C1, a transmission
mechanism E installed in the housing C and adapted to transfer
15 inserted banknote away from the banknote insertion slot C1 to a
banknote passage C2 and then a banknote storage cabinet (not
shown), and a circuit board D installed in the housing C and
adapted to detect the authenticity of inserted banknote. The
housing C comprises a toothed safety plate F provided at the
20 banknote passage C2 and adapted to prohibit backward movement
of inserted banknote. This design of banknote receiver is still not
satisfactory in function. If inserted banknote is pulled backwards
with a metal string or an external body, inserted banknote will be

torn or damaged by the toothed safety plate.

SUMMARY OF THE INVENTION

The present invention has been accomplished to provide a banknote receiver, which eliminates the aforesaid problem. It is
5 the main object of the present invention to provide a banknote receiver, which effectively prohibits people from pulling inserted banknote backwards without causing damage to inserted banknote. It is another object of the present invention to provide a banknote receiver, which is easy and inexpensive to manufacture. According
10 to one aspect of the present invention, the banknote receiver comprises a housing with a banknote insertion slot, a detector unit formed of an upper base and a lower base and mounted in the housing and adapted to scan the authenticity of banknote inserted into the banknote insertion slot, the detector unit defining an
15 angled passage between the upper base and the lower base for guiding inserted banknote away from the banknote insertion slot to the banknote storage cabinet, and a banknote storage cabinet adapted to receive verified banknote, the banknote storage cabinet having a spring member suspending in the banknote inlet thereof
20 and adapted to prohibit reverse movement of received banknote. According to another aspect of the present invention, the banknote storage cabinet has an elongated locating hole extended along the top side of the banknote inlet and adapted to accommodate the

burglarproof spring member. The user can easily replace the burglarproof spring member when desired. According to still another aspect of the present invention, the burglarproof spring member can be made of resilient metal, plastics, or any of a
5 variety of elastic materials.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view of a banknote storage cabinet for use in a banknote receiver according to the present invention.

FIG. 2 is an exploded view of a banknote receiver
10 constructed according to the present invention.

FIG. 3 is an assembly view of the banknote receiver according to the present invention.

FIG. 4 is a sectional view of the banknote receiver according to the present invention.

15 FIG. 4A is an enlarged view of a part of FIG. 4.

FIG. 4B is similar to FIG. 4A but showing the burglarproof hook turned to the active position and the pawls of the burglarproof spring member returned to their former shape.

FIG. 5 is a sectional view of a banknote receiver
20 constructed according to the prior art.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. from 1 through 4, a banknote receiver in accordance with the present invention is shown comprised of a

housing 1, a banknote storage cabinet 2, and a detector unit 3. The housing 1 is adapted to accommodating the banknote storage cabinet 2 and the detector unit 3, having a face panel 11 provided at the front side. The face panel 11 has an insertion slot 111 for entry of banknote. The detector unit 3 detects the authenticity of banknote inserted into the insertion slot 111. A conveyer 4 and a banknote impression mechanism 5 are provided inside the housing 1. The conveyer 4 comprises conveying belts 41, wheel holders 42 provided in between the conveying belts 41, and idle wheels 421 respectively pivoted to the wheel holders 42. The conveyer 4 transfers inserted banknote from an angled passage 30 to the banknote storage cabinet 2. The banknote impression mechanism 5 holds down transferred banknote for smooth delivery.

The detector unit 3 is comprised of an upper base 31 and a lower base 32. The upper base 31 comprises two spring hooks 311 provided at the rear ends of the two opposite lateral sides thereof and respectively hooked in respective hook holes 121 in the two side panels 12 of the lower chamber 10 of the housing 1. After installation in the housing 1, the upper base 31 and the lower base 32 define the aforesaid angled passage 30 for the passing of inserted banknote. The lower base 32 comprises a pivoted burglarproof hook 321 and a sensor 322 respectively disposed adjacent to the angled passage 30. The burglarproof hook 321 is

controlled to stop banknote from reverse movement. The banknote storage cabinet 2 is fastened to the housing 1 remote from the face panel 11, having an elongated banknote inlet 21, an elongated locating hole 22 extended along the elongated banknote inlet 21, and a burglarproof spring member 23 mounted in the locating hole 22 and adapted to prohibit reverse movement of received banknote. The burglarproof spring member 23 comprises an elongated base 231 fastened to the locating hole 22, and curved pawls 232 suspended from the elongated base 231 and projecting into the angled passage 30 between the upper base 31 and the lower base 32 to let banknote pass in one direction to the inside of the elongated banknote inlet 21. Because the burglarproof spring member 23 is mounted in the locating hole 22 outside the banknote storage cabinet 2, the user can easily replace the burglarproof spring member 23 when desired.

Referring to FIGS. 4, 4A and 4B, the detector unit 3 is mounted in the lower chamber 10 of the housing 1. When the upper base 31 and the lower base 32 aligned in the lower chamber 10 of the housing 1, the detector unit 3 scans the authenticity of banknote inserted into the insertion slot 111. When the authenticity of inserted banknote verified, inserted banknote is delivered through the angled passage 30 to the banknote inlet 21 of the banknote storage cabinet 20 to force the curved pawls 232

of the burglarproof spring member 23 backwards, and therefore the curved pawls 232 are deformed to let banknote pass. When banknote passed into the banknote inlet 21 of the banknote storage cabinet 20, the curved pawls 232 immediately return to their
5 former shape to prohibit reverse movement of received banknote. Therefore, any body trying to pull back inserted banknote with a cord member, tape or metal string cannot succeed.

Further, because the passage 30 is a substantially L-shaped passage, the banknote transferring surface and the insertion slot
10 111 are not on the same plane. This special feature effectively achieves the desired burglarproof function. Further, the burglarproof spring member 23 can be made of metal, plastics, or any of a variety of suitable elastic materials. Because the component parts of the banknote receiver are simple, the
15 manufacturing cost of the banknote receiver is low and, the assembly process of the banknote receiver is simple.

A prototype of banknote receiver has been constructed with the features of the annexed drawings of FIGS. 1~4. The banknote receiver functions smoothly to provide all of the features
20 discussed earlier.

Although a particular embodiment of the invention has been described in detail for purposes of illustration, various modifications and enhancements may be made without departing

from the spirit and scope of the invention. Accordingly, the invention is not to be limited except as by the appended claims.